

THE ASSOCIATIONS OF VIGOR, ANGER, AND DEPRESSION
WITH CONVERSATIONAL ARGUMENT BEHAVIOR

by

Anthony William Chidester

A thesis submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Master of Science

Department of Communication

The University of Utah

May 2017

Copyright © Anthony William Chidester 2017

All Rights Reserved

The University of Utah Graduate School

STATEMENT OF THESIS APPROVAL

The thesis of **Anthony William Chidester**

has been approved by the following supervisory committee members:

Daniel Canary	, Chair	2/1/2017
		Date Approved
Heather Canary	, Member	2/1/2017
		Date Approved
Mark Bergstrom	, Member	2/1/2017
		Date Approved

and by **Kent Ono**, Chair/Dean of

the Department/College/School of **Communication**

and by David B. Kieda, Dean of The Graduate School.

ABSTRACT

The goal of this study was to investigate the relationship between mood states and conversational argument behavior. Specifically, relationships among vigorous, angry, and depressive mood states and specific agreement or disagreement prone argument behaviors is analyzed. Stephen Toulmin's argument model, concepts of field argument, and substantial and analytic argument types provided the theoretical background for this study, as Toulmin's model of argument and related features outline how arguments unfold. An observational study of married couples revealed significant correlations between vigor with agreement acknowledgement, anger with objections, and depression with responses. Seventy-two individuals composing 36 romantic couples engaged in problem-solving interactions in their homes regarding conflict topics that they nominated. Correlations between mood state and argument behavior suggest that mood plays an important part as people negotiate conversational arguments. Specifically, mood and argument behavior appear to have a strong connection during social interaction. This study also revealed biological sex differences in how argument behaviors associate with mood. Moreover, links between positive and negative mood differ according to argument forms of agreement and disagreement. Finally, this study points toward future research exploring a wide range of mood states and argument behavior and possible causal connections between the two phenomena.

TABLE OF CONTENTS

ABSTRACT	iii
LIST OF TABLES	vi
Chapters	
1 INTRODUCTION	1
Reasons to Investigate Conversational Argument	1
Mood and Social Interaction	5
Mood and Mental Health	6
Mood and Conflict	8
2 LITERATURE REVIEW	10
Theoretical Basis	10
Feature Characteristics of Conversational Argument in Personal Relationships	20
Mood States and Conversational Argument	25
3 METHOD	36
Participants	36
Conversational Argument	37
Assessing Moods: The Profile of Mood States	39
Procedures	39
Units of Observation	40
Analysis Plan	41
4 RESULTS	45
Variable Testing	45
Descriptive Statistics	45
Vigor	47
Anger	47
Depression	48
Research Questions	48

5 DISCUSSION	55
Warrants and Mood State	56
Mood and Argument Correlations	58
Study Limitations and Suggestions for Future Research	62
Conclusion	64
REFERENCES	66

LIST OF TABLES

Tables

3.1 Conversational Argument Coding Scheme	43
3.2 Internal Consistency Reliability of the POMS	44
3.3 POMS Subscales Descriptive Statistics	44
4.1 Alpha-Coefficients for Mood.....	51
4.2 Correlation Matrix	52
4.3 Sex Differences Variables.....	53

CHAPTER 1

INTRODUCTION

The major purpose of this research is to examine the links between individual mood states and dyadic conversational argument behavior. More precisely, this thesis focuses on the influence of vigorous, angry, and depressive mood states on conversational argument behaviors. In Chapter 1, the rationale for investigating conversational argument is presented. Following the rationale, the theoretical views of Stephen Toulmin (1958) are reviewed. Next, salient research regarding conversational argument and mood is offered.

Reasons to Investigate Conversational Argument

Argument occurs in many forms in various social interactions. Argument occurs in legal systems (Azuelos-Atias, 2009), work settings (Johnson, 2009), and teams (Seibold, Lemus, & Kang, 2010). Arguments also occur in romantic relationships. A variety of studies have focused on interpersonal argument phenomena, including the complexity of arguments and argument cooperation between partners (Canary, Brossmann, Brossmann, & Weger, 1995), argument quality and expectations of arguments (Hample, Warner, & Norton, 2006), and verbal aggression (Johnson, Becker,

Wigley, Haigh, & Craig, 2007).

In recent years, the term *conversational argument* has been coined to describe specific argument behaviors that occur in informal interactions. Conversational argument is defined as a function that “either removes or reduces anticipated doubt regarding a claim’s acceptability to an actual or imagined skeptic or to reinforce the truth of the claim to create solidarity and/or express reassurance” (Weger & Canary, 2010, p. 86). This definition differs from that of conflict. A general definition of conflict is offered by Canary and Lakey (2013) as “any incompatibility that can be expressed between people” (p. 1). Definitions for conflict and conversational argument illustrate that these two types of social processes differ in nature.

Nevertheless, researchers may see similarities between conflict and conversational argument. For example, conflict is described as an expressed incompatibility. People may choose to deal with those incompatibilities in a variety of ways. One way might be to negotiate and compromise until the incompatibility has been resolved. Through argumentative processes, two people may begin to understand each other’s viewpoints better. Conversational argument emphasizes that solidarity and mutual understanding are created by such a negotiation process. However, conflict in general can have a wider range of ways to deal with perceived incompatibilities, such as hostility or violence. As such, I note that conversational argument and conflict share some similarities notwithstanding their differences.

Conversational argument involves interpersonal communicative behavior that is symbolic in nature. Conversational partners use argument to develop ideas through interaction. For example, conversational argument research has investigated argument

behavior in friendships (Levine & Boster, 1996; Semic & Canary, 1997), romantic relationships (e.g., Canary, Weger, & Stafford, 1991; Johnson, Averbach, Kelley, Shr-Jie, 2010), computer-mediated interaction (e.g., Weger & Aakhus, 2003), decision-making processes, (e.g., Gouran, 1989; Seibold & Myers, 2007), jury deliberations (Burnett, Sargent, & Badzinski, 2010), cross-cultural negotiations (Fletcher, Nakazawa, Chen, Oetzel, Ting-Toomey, Chang, & Zhang, 2014), television talk shows and news programs (Lauerbach, 2007), ongoing serial arguments (Johnson & Roloff, 1998; Roloff, Reznik, Miller, & Johnson, 2015), and other research on face-to-face interaction.

Conversational argument may also intersect with maintaining perceptions of equity in marriages. Specifically, couples that perceive equity in their relationships experience higher levels of relational satisfaction, contentment, and other indicators of relational quality, compared to people who perceive their relationships to be overbenefited and underbenefited (Hatfield et al., 1985). Inequity frequently leads to distress in the form of negative emotions and decreased relational satisfaction. Underbenefited people tend to feel cheated or taken advantage of, which leads them to experience anger, sadness, depression, and other negative emotions (Sprecher, 1986, 2001). Overbenefited individuals have less distress than do underbenefited people, but overbenefited individuals tend to feel guilt and/or smothering (Hatfield et al., 1985; Sprecher, 2001).

Researchers have examined conversational argument in several ways as they pertain to interactions between romantic partners. Canary, Weger, and Stafford (1991) identified sequences that exist in couples' arguments. Argument sequences are defined as act-to-act behaviors between fellow arguers. For example, if person A makes a

statement or claim in an argument, person B might respond to that claim in a variety of ways. Person B might be inclined to challenge the claim, or to ask for clarification. Canary et al. (1991) identified 12 argument sequences from a possible 144 combination sequences, each with different functions. Some functions initiate an argument and others develop the argument. Some sequences mark agreement and others mark challenges to a statement. A full description of the Canary et al. sequences will be offered later. Other research on conversational argument includes the Canary et al. (1995) examination of conversational argument and perceptions of fellow arguer's communicative competence, effectiveness (i.e., achieving one's goals), and appropriateness (i.e., meeting the partner's expectations for interaction). Canary et al. (1995) related the level of complexity to an argument and perceptions of the appropriateness of that argument complexity. For example, if person A perceives person B's argument to be incomplete, arguers perceive this as an argument that lacks developed claims. Person A then forms an opinion of person B's arguing skills.

One important next step for conversational argument research is to investigate associations between mood states and interaction (Weger & Canary, 2010). Mood refers to a temporary "state of mental being in which people experience positive or negative emotions" (Canary & Lakey, 2013, p. 51). In this vein, moods are transient experiences that can change between and during interactions. The rationale for this study regards three areas of research: linking mood to social interaction, connecting mood and mental health, and offering salient findings in the mood and conflict literature.

Mood and Social Interaction

Determining the role of mood states in argument is important for several reasons. First, mood states probably affect the way social interactions unfold. Understanding mood better will help us understand more about social interaction. For instance, Neff, Fulk, and Yuan (2014) discovered that mood states play an important role when individuals interact with others to communicate personal knowledge. Neff et al. (2014) discovered that people experiencing positive mood states exhibit clear and constructive self-expression and also remember other's messages more efficiently than do people experiencing negative mood states. More specifically, Neff et al. found that experiencing positive mood resulted in higher precision when communicating personal knowledge, and a tendency to remember more intimate details about others. Links among mood, communicating, and remembering personal knowledge suggest that people experiencing positive mood will communicate more efficiently and perhaps act friendlier to one other than individuals experiencing negative moods. In this way, mood acts as a regulatory factor for people reciprocating information exchange.

Furthermore, mood states are associated with how people gain common understanding. Vallacher, Nowak, and Zochowski (2005) found that moods help people synchronize ideas about actions, thoughts, and values. Vallacher et al. called this synchronization process "coordination." Mood acts as the catalyst for coordination. For example, if people experience similar mood patterns such as frequent negative mood states, then they are more likely to share similar ideas about actions, thoughts, and values. In coordination, mood is a transactional element, which means that mood is communicated and shared between people through the content of messages that are sent

and received and the expression of nonverbal signals. If individuals are unsuccessful in communicating and understanding each other's mood states, coordination is less likely to occur. The work of Vallacher et al. indicates that as positive and negative mood states help people coordinate their ideas, arguments may become more cooperative when people possess similar mood states.

Mood states can impact social interaction in other ways as well. For example, verbally expressing mood states can have negative effects on others. Vella (2012) reported that the expression of some mood states, such as hostility, can draw out antagonistic behaviors in other people. The transitional nature of moods prompts people to communicate mood states as they interact. For example, Vella reported that mood states influenced types of messages shared between people during interactions. If people experienced negative mood states, then messages also tended to be negative. Negative messages from one person can cause negative mood states in another. The verbal expression of mood states, such as shouting, can result in a reciprocation of behavior. In some instances, such as the reciprocation of hostile moods, social interaction can become aggressive or strained (Vella, 2012).

Mood and Mental Health

Mood is also linked with mental health. Negative mental health (such as depression) has adverse effects on individuals' lifestyles (Davis, Easlon, Halligan, & Grant, 2007). Kovess-Masfety (2013) studied the relationship between negative mood and depression. Kovess-Masfety's research links certain negative mood states (such as irritability) to major depression in adults. Kovess-Masfety does not suggest a causal

relationship between negative mood and depression, but rather notes that mood and depression appear to be symbiotic in nature. In other words, adults who are depressed are also likely to exhibit other negative mood states.

Additionally, some positive mood states affect mental stability. Certain social stimuli, such as a touch from a romantic partner, can elicit positive mood states (Debrot, 2014). In Debrot's study, positive mood states were associated with an increased ability to manage stress. Positive mood promotes healthy stress management due to its association with feelings of alertness and vigor, and is related to an increase in cognitive activity as well as an increase in creativity (Loh, 2014). Loh (2014) reported empirical evidence that suggests that positive mood helps people focus on a wider array of mental stimuli than does negative mood. Negative mood also causes individuals to narrow their attention and process fewer stimuli than people experiencing positive mood states. Inversely, positive mood widens attention. Thus, positive mood stimulates vigor, alertness, cognition, and creativity. The combination of vigor, alertness, and increased cognitive ability promotes health management (Debrot, 2014). Debrot (2014) also emphasized the mental health importance of regulation of mood states to maintain positive outcomes for mental health reasons. Just as negative moods states are associated with depression, positive mood states are associated with positive outlooks and better stress management. In other words, people who consistently experience positive mood states are less likely to be afflicted with depression and tend to be more successful at dealing with stress.

Mood and Conflict

Greater understanding of associations between positive and negative mood and conversational argument is warranted. Although many reasons exist to investigate the correlation between mood and conversational argument, the research regarding conflict management strategies and mood perhaps yields the most relevant information because mood can influence conflict strategy and relational stress coping. As noted above, conversational argument and conflict are different social phenomena. However, both conversational argument and conflict share similar characteristics. If conversational argument is the process of removing doubt about claim's acceptability and a conflict is any perceived incompatibility between people (defined above), then by definition, arguments can stem from conflict and vice versa. In fact, one of the major differences that indicate when argument might become conflict is when people experience strong negative mood (Cionea, Johnson, Bruscella, & Van Gilder, 2015).

Types of conflict strategies used by couples are related to mood in both positive and negative ways (Creasey, Kershaw, & Boston, 1999). Creasey et al. found that mood predicted types of conflict strategies used with close relational partners, such as romantic partners and close friends. As anticipated, negative mood states predicted the use of negative or harmful conflict strategies, such as whining, complaining, criticizing, and rejecting messages in close relationships. Creasey et al. suggested that mood influences couples' confidence in the stability of their romantic relationships. The belief that a relationship will fail may lead to more negative moods during interactions, thus leading to negative conflict strategies.

Mood also affects the way couples cope with stress (Marco, Neale, Schwartz,

Shiffman, & Stone, 1999). Stress refers to “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being” (Lazarus & Fulkman, 1984, p. 19). Relational stress correlates with negative mood states, which in turn affects the way people cope with relational problems (Marco, Neale, Schwartz, Shiffman, & Stone, 1999). Bad moods led participants in the Marco et al. study to focus more on stress and relational problems than on acceptance of problems or finding solutions to them.

Associations among mood, social interaction, mental health, and conflict suggest that mood may also play a role in conversational argument interactions. However, more conclusive evidence is needed. Furthermore, although mood is associated with interaction, it remains unclear how mood is linked specifically to conversational argument. This study proposes an investigation of the association between mood and conversational argument.

CHAPTER 2

LITERATURE REVIEW

Theoretical Basis

The theoretical basis for the current research project stems from Stephen Toulmin's argument model (1958). First, a rationale for the use of Toulmin's model is presented. Next, a summary of researchers' evaluations of Toulmin's scholarship is included, after which the components of Toulmin's model are provided, which describe how arguments unfold. Lastly, some relevant theoretical elements are presented. Importantly, the following material does not aim to provide a complete review of Toulmin's theory. Reviews of Toulmin's work appear elsewhere (e.g., van Eemeren, Grootendorst, & Henkmans, 1996). Instead, the following material describes features of Toulmin's theory that informed the present thesis.

Rationale for Toulmin's Model

Perhaps the most frequently used model for argument theory and research is Stephen Edelston Toulmin's (1958) model, which is also important for understanding conversational argument in the present project for two reasons. First, it offers a basis for other argument models that have been developed to fit specific contexts such as

extending Toulmin's model to fit highly complex argument patterns. Importantly here, the Toulmin model readily applies to romantic interactions. As discussed in a subsequent section, conversational argument shares important characteristics with Toulmin's argument model. For example, argument behaviors that Toulmin refers to as claims are referred to as *assertions* in the Conversational Argument Coding System. However, claims and assertions embody the same basic argument behavior: to initiate a discussion. In one sense, scholars can view Toulmin's model as a "parent" model that leads the way for other models to be born and developed. Toulmin created his argument model in 1958. It provided an alternative to classical argument theories and models. For example, Toulmin held the idea that arguers present information to qualify certain behaviors as statements of an argument and to offer rebuttals to certain points presented during an argument (Trent, 1968). Furthermore, Toulmin's model provided a way for people to analyze argument schemes that are more complex than classic syllogistic models. Both Trent (1968) and Voss (2005) used Toulmin's model as a basis to create an alternate model to fit their specific research purposes. Trent (1968) used Toulmin's model to create an alternate model that more easily identifies inferences made in arguments. Voss (2005) used Toulmin as a basis for creating a model that deconstructed highly complex arguments specifically geared toward looking at problem solving in arguments. In a similar vein, Toulmin's model informed this current research and elements found in the Conversational Argument Coding Scheme (CACS; Canary et al., 1982), which is often used to code argument behaviors.

The second reason Toulmin's model is critical to the present research is Toulmin's understanding of how argument unfolds as sequential interaction. Argument

sequences refer to act-to-act behaviors that occur when social actors attempt through communication to reach convergence of each other's beliefs and behaviors (Canary & Siebold, 2010). Examining Toulmin's model makes it easier to understand why and how arguments unfold between conversational partners. Toulmin's model is perhaps most helpful to analyze how people exchange information that might be perceived as discrepant.

Research Evaluations of Toulmin

Uses of Argument (1958) by Stephen Toulmin has generated much debate among argument scholars provoking advocates and critics alike. Perhaps the leading criticism is that Toulmin's theoretical assumptions challenge conventional approaches to the analysis of argument. For example, Keith and Beard (2008) see Toulmin as an enemy of logic, which they view as incompatible with argument scholarship.

Perhaps some of this criticism comes from a lack of understanding of Toulmin's argument. For instance, Keith and Beard's (2008) interpretation of Toulmin's abandonment of logical methodological approaches to argument analysis may not be accurate. Toulmin himself addressed the concern of logic versus rationality in several of his works. In *Human Understanding* (1972), he stated that *excessive* logic can be damaging to understanding argument's historical perspectives. Toulmin advocated abandoning a *stark* logical view of scholarship in favor of the acknowledgement of several dialectic variables. In *Return to Reason* (2001), Toulmin argued that scholars need to balance both logical and rational approaches in order to interpret argument behaviors that happen among real people in the real world.

Similarly, Verheij (2005) has criticized Toulmin for focusing too much on the argument scheme and not enough on interpreting argument. Verheij stated that despite Toulmin's model being thoroughly outlined, the model lacks clearly defined terms. For example, Keith and Beard (2008) point out *warrants* (an integral piece of the Toulmin argument model scheme) are particularly loosely defined. As a result, a disharmony exists between scholars as to how to define warrants.

Scholars who appreciate Toulmin's theoretical approach appear to have no trouble finding value in his argument model. Moag (1966) stated that Toulmin's model is useful in easily classifying and interpreting argument behaviors. Furthermore, Moag argued that Toulmin's approach provides a necessary rhetorical lens through which scholars can analyze individuals' argument behavior choices.

Components of Toulmin's Model

The heart of Toulmin's model comprises six major and necessary elements that occur in an argument episode (Toulmin, 1958). The six elements are not all present during an argument exchange, but they are present in fully developed arguments. On a basic level, argument can be seen as an exchange between people who present statements and standpoints and then support them. When a social actor makes a statement, participants may or may not be of the same opinion. Statements are then supported and defended from each actor as the argument progresses (Toulmin, 1958).

Statements made at the beginning of an argument are an assertion of opinion or an introduction to a topic. This element is also referred to as a *claim*, and it is the starting point for an argument. In this step, it becomes clear to each actor that a controversy is

present. A wide range of claims can occur in an argument and claims vary in how they are composed. Claims can be based in fact, such as an event that takes place in the past or present. Claims can also be abstract and offer an opinion or moral judgment. In brief, a claim states a position on a particular topic.

The next element in Toulmin's model of argument includes gathering information to support the claim (Toulmin, 1958). The *data* supporting a claim function as proof that the claim is correct. This information is the first line of support for the claim, and it acts as the first attempt to persuade actors that the claim is valid.

The third element of Toulmin's model concerns the justification or warrant of a claim (Toulmin, 1958). The *justification* is the frame from which data can be interpreted. Naturally, after a claim and supporting data are given, the interactants might not reach consensus. The justification allows for the claim and supporting data to provide meaning for the subject being discussed.

The final three elements of the Toulmin model are called backing, qualifiers, and rebuttals (Toulmin, 1958). *Backing* provides support for the justification. A *qualifier* weakens the initial claim and sets boundaries or conditions in which the claim is true. Thus, a qualifier limits the claim to a set of specific circumstances. It indicates the strength of the relationship between claims and the warrant. The *rebuttal* attempts to weaken the qualifier.

Argument Fields

One of the main ideas Toulmin presented is that arguments do not have universal elements. In other words, different argument behaviors vary according to different

logical types. Toulmin (1958) referred to this idea as argument fields. The elements found in argument can be classified as either “field-invariant” or “field dependent.” The term field-invariant suggests that elements classified as such do not change across different argument fields. Inversely, field dependence describes argument elements that exist only in a designated field. Toulmin also leaves room for further questions regarding how many argument fields exist. In addition, remaining questions include defining elements that are field-invariant and field dependent.

Toulmin (1958) used examples of arguments to introduce the idea of different and distinct fields. He states that arguments about mathematical proofs are distinct from arguments involving convictions in a trial. Further, arguments in a trial obviously differ from arguments regarding works of art. These distinctions might lead a reader to believe argument fields are related to the subjectivity of the topic being discussed. However, Toulmin reveals that argument fields include argument behaviors that create important distinctions. Some scholars (Miller, 1983; Newell, 1984) postulate that Toulmin’s argument fields were not adequately defined. Newell (1984) states that Toulmin left enough room for interpretation on the idea of argument fields that it created confusion among scholars attempting to assimilate the idea. Years after Toulmin’s *The Uses of Argument* was released, several scholars debated the exact nature of argument fields. However, taking into account Toulmin’s description, we can apply the theoretical concept to argument scholarship and begin to understand how the idea of argument fields is usefully applied.

Argument fields can be thought of as disciplines with unified rules (Miller, 1983). Looking back to the example from *The Uses of Argument* (1958) (e.g., courtroom

arguments, arguments regarding mathematics, etc.), it becomes clear that arguments can differ depending on the field. Each of these examples has a distinct set of argument rules that can vary in structure. For instance, the heavily structured rules in a court room are out of place in more casual or conversational arguments. Miller (1983) explained that fields and their accompanying rules can be clearly defined or diffused. Also, arguers and argument structures can follow a shared pattern of analysis regarding arguments within specific fields. Specific argument fields indicate that argument goals can be clearly or ambiguously defined and methods for establishing argument goals also differ between fields. Patterns regarding rules, argument structures, and appropriate behavior are field-dependent traits. This indicates that structure and behavior vary according to the logical type of the argument to which it belongs (Toulmin, 1958).

To further the meaning regarding argument fields, Jacobs (1983) suggested that arguments fields are made up of “constellations of values, norms of conduct, and sources of authority” (p. 748). These values, norms, and authorities establish argument behavior within a distinct field. Distinctions in argument fields along with implication of differing rules, values, norms, and authorities suggest different social spheres depending on argument type. Newell (1984) stated that fields reflect a community of arguers who analyze arguments according to the field in which the argument belongs, which means that these argument “communities” also have a unique way of processing meaning from arguments both after the fact and during argument proceedings. As such, arguments can be understood only by people involved in their respective argument fields (Rowland, 2008).

Substantial and Analytic Arguments

According to Toulmin (1958), the simplest argument starts with a claim and ends in a conclusion. The warrant (as mentioned above) provides the bridge between claim and conclusion. In the CACS, warrants are comprised of amplifications, justifications, and elaborations. A full account of the CACS will be offered later. However, at this time, an initial representation of the CACS is offered and illustrated in interaction examples below.

The CACS classifies *assertions* as statements of belief or opinion. *Propositions* are defined as statements that call for discussion or action. *Elaborations* are identified by statements that support other statements by provided evidence or clarification. *Agreements* are statements that indicate agreement. *Objections* are statements that deny the truth or accuracy of another statement. Similarly, *responses* are statements that defend other statements that are met with objections and challenges. These three behaviors are categorized together and referred to as developing points by the CACS. Developing points serve to help arguers understand how reasoning occurs. Theoretically, developing points are key argument elements that help us understand how convergence takes place. For instance, the following example illustrates how elaborations bridge an assertion with a conclusion. This and other examples are taken from data collected in 2002 by Canary and associates at Arizona State University. Since 2002 the data set has not been analyzed. The example below highlights a section of a conversational argument regarding household maintenance.

Couple 15

Person	Message	Code
A	And we decided our inside- I'm inside, you're outside.	ASST
A	And I think I keep up the inside okay.	ELAB
B	Well, you do.	AGMT

Discussing their household maintenance routines, this couple quickly came to an agreement on the point illustrated above. In the larger context of this individual conversational transcript, we learn that person A is not satisfied with person B's maintenance of the outside area of their home. The conversation begins with a claim that I paraphrase here, "My responsibility is cleaning the inside of our home, while your responsibility is cleaning the outside of our home." The logical jump person A is making is that she is upholding her side of their relational bargain, but person B is not. Person A attempts to make her logical jump clear with her elaboration, "and I keep the inside clean." Person B quickly agrees. One of his subsequent comments is filling the gap that is not explicitly stated, "...you expect the outside to be just as clean as the inside." The implication brought forth by person A's elaboration is that their household maintenance agreement is not being fulfilled by either party. The inside of the home remains neat and tidy but the outside does not. In this argument sample, the elaboration goes unchallenged by person B. The conversation above demonstrates how developing points can be used to provide the reasoning for a claim to link to the conclusion.

Toulmin (1958) refers to this argument type as an analytic argument. Analytic arguments are simple because warrants are unchallenged and interaction partners tend to reach the conclusion of a point quickly. Toulmin posed the question whether analytic

arguments could be considered *true* arguments due to the lack of refuted warrants.

However, we see examples of such arguments happening in real conversations, as shown above.

Substantial arguments contain the same elements as analytic arguments such as claims, warrants, and conclusions, but they also include rebuttals and backing. Substantial argument fields indicate that the elaborations to a claim have been challenged in some way, and that the logical inferences that developing points provide are not universally accepted between partners. In substantial arguments, partners either do not agree and/or they do not have shared understanding of the points made in developing points. Thus, the argument often develops with more divergent turns to clarify the reasoning between assertions or propositions and conclusions. An example of this type of substantial argument development is demonstrated by a second couple. The context for the conversation below regards the couple's persuasive messages to each other.

Couple 29

Person	Message	Code
A	What'd you put for number four: "I make him/her do what I want"?	PROP
B	One.	ASRT
A	I put three.	ASRT
A	I slight disagree that I make you do what I want because I am very opinionated.	ELAB
A	So, I try and get you to go in my direction a lot of the times.	ELAB
B	See, I don't.	OBJC
B	I would prefer that you do what you think is right, and you're intelligent to do things that are right.	ELAB
A	Don't you like it to go along with your way of thinking, though?	RESP
B	No...Sometimes.	RESP

This conversation begins with person A making both assertions and elaborations. However, the key differential from the previous example is the objection person B inserts. This objection is a direct challenge to the elaboration. At this point, person A is obligated to provide support for her elaboration in the form of a response: “Don’t you like it to go along with your way of thinking?” In this way, substantial argument types include an additional layer to an argument that reaches beyond developing points that is demonstrated by rebuttals and backing. This layer provides opposition to the reasoning embedded in developing points. At this point, the arguer who initially gave a developing point provides backing in an attempt to clarify or reinforce the reasoning embedded within it. As the name of the argument type suggests, these arguments are more substantial and include argument elements that are adversarial as partners seek co-created meaning. Analytic arguments can be classified as arguments in which the warrants or developing points are unchallenged, whereas substantial arguments are arguments that add opposition to and additional clarification of elaborations.

Feature Characteristics of Conversational

Argument in Personal Relationships

Argument in Romantic Relationships

Numerous scholarly works examine argumentation in romantic relationships. Some studies important to this research concern negative argument or conflict strategies and serial arguments. These two communicative elements can have an impact on romantic relationships by predicting relational dissolution and the extent of satisfaction due to argument processes. Argument/conflict strategies and serial arguments are

presented here.

A person's behavior during arguments can be harmful to overall relational health. For example, Gottman (1994) cited four behaviors in particular that predict divorce over time: criticism, defensiveness, contempt, and stonewalling. *Criticism* refers to a critique or complaint about a partner that implies blame or shortcoming. *Defensiveness* is the pattern of deflecting accountability or responsibility when a complaint or critique is offered. Messages of *contempt* imply the loathing or dislike from one partner for the other. Finally, *stonewalling* is a noncommunicative behavior when a person shuts down and refuses to speak to his or her partner.

A common destructive communication pattern is the *demand/withdraw* argument pattern. Demand/withdraw can be particularly destructive to interpersonal relationship (Cionea, Johnson, Bruscella, & Van Gilder, 2015). Demand withdraw occurs when one person makes aggressive emotional demands for change and the other person retreats through passive inaction or defensiveness. The demand/withdraw pattern has strong negative associations with happy marriages (Caughlin & Huston, 2006) but has positive associations with depression (Caughlin & Huston, 2002).

Despite positive or negative argument behaviors, some arguments are more difficult to resolve than others. Arguments that reoccur without mutual resolution are known as serial arguments (Cionea & Hample, 2015). Serial arguments involve the same topics over different interactions, causing a disruption in the normal flow of a romantic relationship communication. Serial arguments are perceived by partners as more unresolvable if the argument includes elements that violate interpersonal expectations (Johnson & Roloff, 1998), such as the belief that a partner will not harm the other. If a

serial argument involves elements that indicate violence is possible, then the argument is usually perceived as less resolvable.

Moreover, serial arguments can be quite stressful to relational partners. Johnson, Kelley, Liu, Averbeck, King, and Bostwick (2014) reported that the degree of stress felt by serial arguments over time is related to personal beliefs about any particular serial argument. Johnson et al. reported five sets of argument beliefs. *Argument enjoyment* beliefs concern the perception of how much a person finds the process of arguing inherently rewarding. *Self-concept* beliefs involve whether the argument will lead to people feeling better or worse about themselves. *Pragmatic outcome* beliefs deal with the question of whether or not the argument is perceived as resolvable. *Ego-involvement* beliefs link the argument to the self-value of a person. Finally, *dysfunctional outcomes* are beliefs about the nature of the argument and if it will lead to negative relational effects (Johnson et al., 2014).

Functional/Structural Nature of Conversational Argument

The functional/structural aspects of conversational argument help clarify the role of conversational argument and how it emerges in actual interaction. First, conversational argument functions as *convergence-seeking discourse* that occurs when interaction partners work to synchronize ideas and beliefs about the world around them (Weger & Canary, 2010). One particular aspect of convergence not yet discussed, however, concerns the presence of doubt and uncertainty. For instance, partners can engage in arguments about uncertainties regarding relational health, emotional states, or perceptions of their partner's communication competence. The process of convergence

reduces uncertainty for both partners.

Structural elements of conversational argument reveal how people enact act-to-act sequences and higher ordered structures that go beyond act-to-act argument behavior to construct a more thorough form of argument (Canary et al., 1995; Canary, Weger, & Stafford, 1991). Canary et al. (1991) uncovered argument sequences built from act-to-act behaviors, meaning some argument behaviors are systematically followed by finite subsequent pair parts that, when combined, compose argument sequences. For example, a conversation might consist of one person making an assertion and the partner follows the assertion with an elaboration, agreement, or disagreement. Sequences, in turn, provide higher patterned arrangements of argument structures. For instance, a joint argument structure occurs when a person makes an assertion, to that the partner offers an agreement, followed by evidence, and then amplifications that are messages that explicitly connect the evidence just given to the partner's initial assertion.

The Elements of Conversational Argument

Since the early 1980s, several researchers have attempted to identify the primary constitutive elements of conversational argument. One team of researchers, led by Canary and colleagues (e.g., Canary et al., 1995; Weger & Canary, 1991; Weger & Canary, 2010), identified six primary argument behavior types that reflect the influence that Toulmin had on their understanding the constitutive elements of conversational argument: starting points, developing points, convergence markers, prompters, delimiters, and nonarguments. *Starting points* indicate the existence of an argument by offering assertions, opinion, and/or appeals to action. *Developing points* advance thoughts and

ideas by offering support for an initial starting point. *Convergence markers* show signs of cooperation, including agreement and acknowledgement. *Prompters* indicate disagreement through objections, challenges, and response statements. *Delimiters* limit the discussion in three ways: frames (a statement that provides context or qualification for other statements), forestall/secure (an attempt to secure the discussion by securing common ground), and forestall/remove (forestalling conversation by preventing conversation point). Nonarguments contain no information or carry no argumentative function. The above behaviors inform research on specific conversational argument sequences and they reflect Toulmin's basic argument structure.

As mentioned, sequences are act-to-act behaviors (Weger & Canary, 2010). Jackson and Jacobs (1980) referred to such sequences as "adjacency pairs" and suggested that conversation sequences have an adjacent nature. For example, after one person makes a statement, the other person's response to that statement is often limited within the confines of relevancy. In this way, adjacency pairs provide direction in conversation by establishing a range of appropriate responses to a statement. The direction provided by adjacency pairs may not always be followed or agreed upon between arguers. However, the concept of adjacency pairs applies to arguments in general. Some examples of adjacency pairs exist in forms such as question-answers, request-grant/refusal, or boast-appreciation/derision. The initial part of a sequence is referred to as a First Pair Part (FPP), which establishes direction for the next turn (Jackson & Jacobs, 1980). The Second Pair Part (SPP) includes an appropriate response. The FPP and the SPP complete a single sequence.

In conversational argument research, Canary et al. (1991) statistically derived four

types of sequences: developing sequences, rudimentary sequences, converging sequences, and diverging sequences. *Developing sequences* help advance statements (starting points or developing points) by elaborating, providing justifications, or creating inferences. *Rudimentary sequences* include starting points that follow other starting points or delimiters. *Converging sequences* involve statements that denote agreement and/or acknowledgement of the partner's another statement. Diverging sequences indicate disagreement by providing statements that are objections and/or challenges to another statement.

In order to link mood states to conversational argument behavior, the current research will focus on both converging sequences and diverging sequences. Both convergence and divergence mark significant directions and outcomes of conversational argument. As explained later, mood is probably one important driver for both converging and diverging argument behaviors.

Mood States and Conversational Argument

Mood states are heavily linked to other emotional constructs. Terms such as mood, emotion, and affect share similar interpersonal and intrapersonal effects that will be discussed in this section. These constructs share similarities, but they are not identical. Emotion is defined as feelings that are fixed upon an object or a cause and that are intense, shortly lived, and clear (Shirom, 2011). On the other hand, mood is described as transient feelings that may last longer than emotions. Mood can be more diffuse and ambiguous than emotions. The term affect has been used by scholars to describe both emotion and mood (Shirom, 2011). Research regarding emotion, mood

state, and affect reveals that not all scholars have a unified definition of these constructs. The definitions above are provided to establish both similarities and differences between these constructs as well as to provide an understanding of the literature being reviewed.

General Effects of Positive and Negative Mood States

Mood states affect the argument process in terms of the likeliness for agreement. Hullett (2004) found evidence to support the Hedonic Contingency. The Hedonic Contingency predicts that if a person is presented with an argument that is consistent with his or her mood, he or she will likely agree with the argument. For example, if a person is in a good mood and is presented with an argument that is also perceived as positive, the likeliness for agreement increases. The inverse is also true of negative moods. If a person is experiencing a negative mood state and is presented with an argument that includes subject matter perceived as negative, then that person will likely disagree with any argument presented.

Also, evidence suggests that moods serve as a moderator for argument agreement, which means that moods will impact the likelihood of agreement between two people based in part on the mood of each person. Hullett (2004) found support for the basic principles of the Hedonic Contingency with the caveat that time appears to be a factor. Hullett's results show that arguments that were consistent with mood states had higher rates of agreement if arguments remained short. The longer the argument lasted, the smaller the Hedonic effects. Hullett's (2004) findings revealed that positive moods served as a mental shortcut in most arguments. In other words, people who felt good agreed more than did people in negative moods.

In conjunction with Hullett's findings, Banas, Turner, and Shulman (2012) discovered that positive mood states associate with increased agreement. People who are in a positive mood state while arguing focus less on the complexity of arguments. Banas et al. refer to complexity in terms of argument quality. For example, the weaker an argument, the less complex it is. The associations of positive moods with less complex argument suggests that people exhibiting signs of positive mood states should be more easily persuaded with significantly weaker arguments than individuals in negative moods states.

In light of these findings, one might expect to see a few associations between mood and conversational argument. As one would expect, positive moods lead to positive argument experiences. Mood is a significant moderator variable for agreement, and people in positive moods need less complex arguments to agree. Convergence behaviors consist of agreements and acknowledgments during an argument. As illustrated above, positive mood states are correlated with more agreement during arguments. Given the fact that people experiencing positive moods are also persuaded easier and spend less time focusing on the complexity of an argument, we might expect to see people exhibiting more acknowledgments as well.

Findings regarding negative mood, in contrast, lead to both predictable and unpredictable relational behaviors. Hullet (2004) found that people in negative moods are less likely to agree with arguments. People in negative mood states spend more time elaborating on argumentative messages. As such, people in negative mood states need significantly stronger arguments to be persuaded. People in negative mood states who were presented with weak arguments did not exhibit agreement.

As with positive moods, negative moods likely act as a moderator of agreement between people in an argument. However, Hullett (2004) found that whereas positive moods acted as a mental shortcut, people exhibiting negative moods spent time considering their own motives and the motives of their relational partner. Consistent with Hullett's results, Das (2012) found that negative mood states were associated with systematic, narrow, focused, and analytic thought processes during an argument. Negative mood would appear to predict a more active mental process during argument. Furthermore, Wegener (1991) found that people in negative mood states perceived that argument quality they were presented with was significantly weaker than people experiencing positive moods. This finding is similarly supported when the argument presented is contrary to the mood state of the person.

In addition to the findings above, people in negative moods found the experience of argument to be dissatisfying (Villodas, 2011). Although positive moods predicted more engaged argument behaviors, negative moods predicted less engaged behaviors followed by reports of a less enjoyable experience.

Negative mood states result in a variety of social phenomena, including a reduced likelihood of agreement, participants dwelling on motives of other people, and a dissatisfying experience. From these findings, it appears that people engaging in arguments with negative moods probably also experience less agreement and more disagreement with relational partners. Diverging behaviors or prompters involve objections, challenges, and responses as mentioned above. Given that people experiencing negative mood states are more likely to focus on the motives of others and spend more time analyzing arguments, one would expect to see more challenges and

objections from those individuals. Argument behaviors such as objections and responses appear to be linked to negative mood states.

Both positive and negative mood states are related to peoples' motives for arguing. Hullett (2004) found that regardless of positive or negative mood states, people sought to reduce negative feelings. Schmid (2010) reported people more easily recognized moods in other people that matched their own mood states. Such emotional recognition might lead people to emulate each other's moods during interaction. However, research indicates that people engaged in argument have a common motive to reduce painful interactions regardless of mood state. Hullett (2004) found that people desired to "minimize punishments" in their interactions. Interestingly, evidence supporting that people seek to maximize benefits has not been found to my knowledge. The term maximizing benefits refers to increasing positive emotions or feelings through social interaction (Hullett, 2004), which suggests that people in negative moods seek to minimize their negative emotions. Inversely, people in positive moods do not appear to maintain positive mood states.

Positive moods most likely promote cooperative conversational argument behaviors (e.g., joint development of arguments). Similarly, it appears that negative moods have symmetrical effects; that is, partners tend to reciprocate negative communication behaviors more than they reciprocate positive messages (Gottman, 1994). However, more evidence is needed to make stronger inferences.

Vigor/Activity

Mood states of vigor and activity are also associated with feeling enthusiasm, high energy, mental alertness, and determination (Park & Hinsz, 2015). Additionally, vigor is characterized by positive energy, balance, and pleasantness (Shirom, 2011). Vigor/activity also is associated with increased levels of positive mental and physical arousal. Park and Hinsz (2015) observed that in small groups, people tended to experience positive moods of longer duration than other mood states. Vigor/activity mood states have also been associated with trust for others (Lount, 2010), particularly in interpersonal settings. In particular, trust is relevant to the argument processes due to trust being an element that interacts with inferring meaning (Toulmin, 1979). Inferring meaning in arguments is associated with providing a warrant for a claim according to Toulmin's model (Toulmin, 1958). Thus, it would appear people experiencing vigor find it easier to trust others and therefore understand inferred meaning easier.

As a construct, *vigor* is comparable to feelings of well-being and resilience. Resilience is described as maintaining a positive outlook in the presence of adversity (Shirom, 2011). People experiencing vigorous feelings tend to engage more with others, especially if the engagement is perceived as potentially rewarding. In other words, people with feelings of vigor will engage with others in ways that will reward them for doing so (Shirom, 2011). Shirom also noted that people tend to seek out vigorous feelings. Seeking vigorous feelings can be done through a variety of activities such as exercise, but one can also feel vigorous through engagement in social activity. Vigor also ties to other constructs such as vitality, engagement, and elation, with elation referencing a sudden feeling that a personal wish has been fulfilled.

Experiencing feelings of vigor results in higher rates of self-expression, constructive opinions, and suggestions (Liu, Tangrialala, Lam, Chen, Jia, & Huang, 2015). These behaviors constitute a constructive self-expression that potentially increases understanding between two communicators.

Both experiencing and perceiving others' vigor/activity mood states result in higher rates of self-expression, constructive opinions, and suggestions (Liu et al., 2015). Further, people experiencing an active mood state generally seek less information when there is no perceived benefit from information seeking.

To summarize the above paragraphs, people feeling positive moods such as vigor/activity tend to agree with others significantly easier than individuals not experiencing positive moods (Banas, Turner, & Shulman, 2102). Vigor/activity is also associated with general feelings of overall positive argument experiences (Hullett, 2004) and with more constructive self-expression (Liu et al., 2015). These findings, coupled with the findings associated with positive mood states, suggest that people experiencing positive moods are easier to convince, have a better argument experience, and are likely to elicit positive moods in others. As such, this indicates that vigor/activity mood states should not only elicit more agreements and acknowledgments between partners but also create an overall positive argument experience. One would expect people experiencing vigor/activity mood state to engage in a productive argument in terms of cooperation that leads to H1 stated as:

- ***H1: Vigor/activity mood states are positively associated with the use of convergence seeking behaviors of (a) agreements and (b) acknowledgements.***

Anger/Hostility

In contrast with positive moods states, anger/hostility can be expressed in a variety of different ways including yelling, attacking, and throwing (Guerrero, La Valley, & Farinelli, 2008). Anger is also associated with high levels of stress and general feelings of dissatisfaction (Arslon, 2010). Experiencing and expressing anger tend to elicit angry moods in others (Van Kleef & Côté, 2007). Further, feeling anger and perceptions of other's anger can lead to the belief that problem solving while angry would be significantly harder to achieve than in other mood states (Arslan, 2010). Anger is also associated with less general agreement in argument and conflict situations (Van Kleef & Côté, 2007).

Other characteristics of anger included associations with displeasure, rage, and irritation (Zhang, 2014). Among other negative mood states, anger in particular has been associated with both competitive and dominating behaviors in arguments. In some cases, these types of angry feelings and behaviors can be reciprocated. People who are confronted with an angry partner tend to become competitive and angry themselves.

Expressing anger can be affected by interpersonal elements. Qin, Lei, and Maier (2013) noted that the expression of anger can be influenced by both the nature of the interpersonal behavior and the perception of the degree to which individuals feel justified in their anger. For example, relational partners may attempt to deemphasize their expression of anger if they perceive their relationships to be commonly cooperative.

Feelings of anger can be perceived through an internalizing process. This internalization process deals with perceptions of appraisals and actions (Liu, 2009). Anger emanating from appraisals comes from a combination of analyzing the self and the

environment. This analysis is referred to by Lui (2009) as “goal-incongruence” and is defined by thought patterns that reflect a need or desire that has not been fulfilled. A person experiencing goal-incongruence analyses then looks for a person to blame for the failure to meet needs or desires. Actionable anger, or expressing anger, then follows goal-incongruent perceptions by attacking others who are perceived as blame worthy for the offense.

As strong feelings of anger lead to less agreement and to hostile moods and actions, it appears likely that individuals experiencing anger would also experience significantly less converging behaviors, particularly taking into account that anger can lead to the attack of others. In argument situations, it is likely attacking will translate into objections and challenges to other’s statements. Anger should act as a catalyst for general disagreement between arguers. As anger expression leads to others adopting angry moods, it is expected that these types of attacking and noncooperative argument behaviors will be reciprocated between partners. Thus, H2 is stated.

- ***H2: Anger/hostility mood states are positively associated with the use of prompter argument behaviors of (a) objections, (b) challenges, and (c) responses.***

Depression/Dejection

Depression is a negative mood state that can affect many aspects of a person’s life. Depression is associated with symptoms such as sadness, pessimism, irritability, exhaustion, restlessness, chronic aches and pains, and disinterest in activities that were previously found to be enjoyable (Knobloch, Sharabi, Delaney, & Suranne, 2016).

Depression can also cause insomnia, agitated behavior, diminished energy, feelings of guilt, or thoughts of worthlessness (Lienemann, Siegel, & Crano, 2013). Additionally, depression can affect social interactions (Knoblock et al., 2016). Depression is often associated with increased hostile behavior during conversation and decreased amicable behavior. Knoblock et al. noted that depressed people have more difficulty maintaining interpersonal relationships and find more difficulty communicating with others. The implication of these types of social effects points to decreased social well-being. Further, depression may have strong links to feelings of uncertainty about relational strength.

In some negotiation settings, sadness and depression are used strategically (Sinaceur, Kopelman, Vasiljevic, & Haag, 2015). As children, some of the earliest behavior is strategic sadness for gain. This might explain that although perceived depression comes with perceptions of submissiveness (Tiedens, 2001), expressing depression and dejection also elicits empathy and compassion from others. Tiedens (2001) reported that people who express depression and sadness gain less power through negotiation than those expressing anger. People expressing depression are also perceived as nicer, warmer, and more likeable than those expressing other moods.

Experiencing depression and dejection can lead to moderate feelings of uncertainty and higher amounts of information processing than other mood experiences (Nuñez, Schweitzer, Chai, & Myers, 2015). In many cases, depression is seen as a call for social support (Wright, King, & Rosenberg, 2014).

As sadness and depression can lead to individuals feeling uncertain, it stands to reason that individuals experiencing depression and engaging in arguments may proceed tentatively and cautiously. It appears likely that people experiencing depression during

or leading up to an argument would attempt to gain common ground with their relational partner as a part of the argument process. It also appears likely that depression or sadness may be expressed strategically to gain common understanding. Thus, H3 is stated.

- ***H3: Depression/dejection mood states are positively associated with the use of delimiter argument behaviors of (a) frames, (b) forestall/secure, and (c) forestall/remove.***

These hypotheses explore the distinct associations between vigor, anger, and depression with the accompanying argument behavior. However, the possibility exists for unforeseen associations among all variables. Thus, a research question will explore associations between all mood variables and all argument variables. A second research question will explore associations among argument behaviors. These questions are stated below.

- ***RQ1: Are there significant associations between mood states and argument behavior outside of the association between vigor/convergence, anger/prompter, and depression/delimiters?***
- ***RQ2: Are there significant associations between argument behaviors?***

CHAPTER 3

METHOD

Participants

Originally, the data used in this thesis were collected in 2002 by Daniel Canary at Arizona State University. In Canary's data collection, 70 couples (140 individuals) participated in a three-part survey and engagement in a typical conversational argument. Each couple took the survey and a recording device back to their home where they filled out the survey and recorded their argument.

Over time, some of the records of each couple's responses and transcripts of arguments were lost. The data set used in this thesis included the conversational argument transcripts from 36 couples (72 individuals). The demographics of these remaining 72 participants are reported here.

The sample then consisted of 36 married couples. The average age for men was 42 years of age ($M=42.9$, $SD=4.4$). For women, the mean age was 41 years ($M=41.4$, $SD=11.8$). The mean for combined age was 42.25. The average time in the committed relationship for men was 15 years ($M=15.29$, $SD=11.38$). For women, the mean time for committed relationships was reported as 14 years ($M=14.8$, $SD=11.9$). The combined average time committed to the relationships was 15.04. Additionally, the average total

time men knew their partners was 18 years ($M=18.75$, $SD=13.17$). Females indicated the average total time they knew their partners was 18 years as well ($M=18.31$, $SD=13.45$). Men reported spending an average of 42 hours at work each week ($M=42.17$, $SD=15.49$). Women reported an average of 30 hours of work per week ($M=30.69$, $SD=16.9$). For men, the average time spent doing household chores was 11 hours per week ($M=11.5$, $SD=10.28$), whereas women spent nearly 24 hours doing chores in the home ($M=23.99$, $SD=30.85$).

Conversational Argument

This thesis used the Conversational Argument Coding Scheme (CACS) (Canary, 1992). The CACS is a coding system of interpersonal and small group arguments (Canary & Seibold, 2010). The coding scheme was first developed in 1982 by Canary, Tanita-Ratledge, and Seibold. Since then, it has undergone a few revisions as the research on conversational argument has grown. The most current coding manual is a 21-page document that presents the various codes, decision rules for coding, and examples of argument sequences and structures (Canary, 1992).

The CACS included six major argument elements that occur during argumentative interaction: starting points, developing points, convergence markers, prompter, delimiters, and nonarguables. These elements with their accompanying components are listed (see Table 3.1). The six major argument elements found on the CACS each have one or more argument behaviors assigned to their major categories. These argument behaviors can be seen as a reflection of Toulmin's argument model from his book *The Uses of Argument* (1958). The CACS and Toulmin's model are considered to be parallel

argument models. Each model has similarities that illustrate particular argument behaviors such as asserting an argument or agreeing with a statement. Coding conversational arguments involves identifying a unit of measurement known as a “thought turn” (Hatfield & Wieder-Hatfield, 1978). A thought turn is a change in ideas that are communicated in a variety of ways such as nonverbal behaviors, single words, and dependent and independent clauses. However, thought turns are most often identified in the form of an independent clause. In instances where thought turns are clearly identifiable, argument behaviors can be coded with the coding scheme listed in Table 3.1.

The general guidelines for coding a conversation are as follows. The first step involves attempting to identify statements as starting points, developing points, convergence markers, prompters, delimiters, or nonarguments. The next step is the attempt to place each argument act in the appropriate code that falls within the six major behavior types. Each turn should be coded with a number 1 through 15 to help frame the proceeding conversation. The assigned number values are used to determine thought turns as they develop. If coders are unable to easily code a statement, then the following rule should be observed: start by attempting to code a statement as either a starting point, developing point, convergence marker, prompter, or delimiter. If the statement cannot be placed into any of these categories, it should be labeled as a nonarguable. The meaning of a statement should be clear from the text of the manuscript. In cases where meaning is not clear, meaning should not be assigned by a coder whenever possible.

Assessing Moods: The Profile of Mood States

The Profile of Mood States (POMS) test comprises 65 items that assesses positive and negative mood states in participants (Norcross, 1984). The POMS measures six mood states on a 5-point Likert-type scale of 1 (not at all) to 5 (extremely). The POMS measures tension/anxiety, depression/dejection, anger/hostility, vigor/activity, fatigue/inertia, and confusion/bewilderment.

Overall, the reliability of the POMS factors is excellent. Table 3.2 reports the Cronbach alpha reliability of the six POMS factors. The data represent patient normative samples at a large university medical center (Lorr et al., 1991). Table 3.2 details mood factors, number of items within each factor, and correlation coefficients.

Procedures

This study analyzed data collected in 2002 by Professor Daniel Canary at Arizona State University involving 70 heterosexual couples in self-identified “committed” conjugal relationships and marriages. These data have not been previously analyzed. These data were collected, using a two-part process. In part one, each partner independently responded to alternative survey measures, including the POMS. In the second part of the study, partners engaged in joint conversations regarding topics that they nominated as potentially problematic in their relationships.

As mentioned, the first part included the POMS test, wherein participants responded to scales involving the following mood states: tension/anxiety, depression/dejection, anger/hostility, vigor/activity, fatigue/inertia, and confusion/bewilderment. Participants recorded how each mood state applied to them

using a 5-point Likert-type scale. All participants were asked how they had been feeling in the previous week. A rating of 1 equates to the subject feeling a particular mood “not at all,” whereas a rating of 5 indicates feeling the mood state “extremely.”

The final portion of part one included instructions for each participant to write and rate topics they perceived as conflicts between the partners. The instructions included a statement that every romantic couple has some degree of conflict. It read, “Every couple has conflict to some degree.” Individuals were asked to list three topics of disagreement. Finally, individuals were asked to rate the importance of each topic they had nominated on a 7-point Likert-type scale. A response of 1 on the scale meant that the individual perceived the problem to be “not at all important” and a rating of 7 meant “very important.” After both partners finished part one of the survey, they moved on to part two together.

In part two, each partner was provided with a cassette tape to record a conversation. The instructions for part two advised each couple to find a quiet and private place to have a conversation. The couples were asked to discuss each conflict issue they indicated in part one. Couples were instructed to stop the conversation and move on to the next topic if the discussion became too heated.

Units of Observation

The argument data have already been transcribed and coded by independent coders subsequent to the data collection in 2002. Upon transcribing each tape, the conversation has undergone two levels of coding. The first level of coding involves the use of the CACS. Each argument behavior was then placed in the mezzo-level six

argument behavior categories: *starting points, developing points, convergence markers, prompters, delimiters, and nonarguables*. This higher ordered placement of argument behaviors into these categories defined the types of argument behaviors that, when combined, operationalized-sequences that partners used.

Analysis Plan

- ***H1: Vigor/activity mood states are positively associated with the use of convergence seeking behaviors of (a) agreements and (b) acknowledgements.***

Participants who experience positive mood states should also exhibit more converging argument behaviors (acknowledgements and agreements). Vigor/activity is the only positive mood state operationalized by the POMS (Lorr, McNair, & Heuchert, 1991). Example items measuring vigor/activity include lively, active, energetic, full of pep, and vigorous. Participants rated each item on a 5-point scale, where 1= not at all; 2= a little; 3= moderately; 4= quite a bit; and 5= extremely. Participants were asked to assess how they have been feeling in the last week. Participant responses to all items were averaged, so that interpretation regarding scores could be made with values assigned to the response categories. Table 3.3 reports the means and standard deviations for each of the POMS subscales.

Because the duration of the conversations varied among couples, averages of argument behaviors are unstable due to differences within the unit of analysis. In addition, differences in the means and variances between couples reflect artificial systematic variance that could easily affect the results. Accordingly, ratios for each argument behavior were created by averaging each specific behavior to the total number

of behaviors in each conversational argument.

This study used a one-tailed test to determine the correlation between mood states and argument behavior. As mentioned above, converging argument behaviors are indicated by agreements and acknowledgments.

To test H1, converging argument behaviors were correlated with the average vigor/activity mood state scores. This has been done to isolate the association between mood and convergence.

- ***H2: Anger/hostility mood states are positively associated with the use of prompter argument behaviors of (a) objections, (b) challenges, and (c) responses.***

To test H2, the POMS measure was again used, this time with items indicating an anger/hostility, which included angry, grouchy, annoyed, furious, and bad-tempered. Diverging behaviors were operationalized by combining prompters and starting points, developing points or combining prompters with other prompters. A one-tailed correlation has been run to determine the association between anger/hostility mood states and diverging argument behaviors.

- ***H:3 Depression/dejection mood states are positively associated with the use of delimiter argument behaviors of (a) frames, (b) forestall/secure, and (c) forestall/remove.***

To test H3, I again used the POMS. Items indicating a depression/dejection mood state included sad, unworthy, discouraged, lonely, and gloomy. Delimiter argument behaviors included frames, forestall/secure, and forestall/remove. These three argument behaviors were tested with a one-tailed correlation with the POMS scale.

Table 3.1

Conversational Argument Coding Scheme

*Starting Points (SP)**ASRT: Assertions. Statements of belief or opinion.**PROP: Propositions. Statements that call for discussion or action.**Developing Points (DP)**ELAB: Elaborations. Statements that support other statements by providing evidence or clarification.**AMPL: Amplifications. Explicit inferential statements.**JUST: Justifications. Statements that offer norms, values, or rules of logic to support the validity of other statements.**Convergence Markers (CM)**AGMT: Agreements. Statements that show agreements.**ACKN: Acknowledgements. Messages indicating recognition and/or understanding, but not agreement to, another's point.**Prompters (PO)**OBJC: Objections. Statements that deny the truth or accuracy of another statements.**CHAL: Challenges. Messages that present problems, questions, or reservations that must be addressed to reach agreements.**RESP: Responses. Statements that support other statements that have been explicitly refuted.**Delimiters (LM)**FRAM: Frames. Statements that provide a context and/or qualification for another statement.**F/SE: Forestall/Secure. Attempts to forestall discussion by securing common ground.**F/RE: Forestall/Remove. Attempts to forestall discussion by preventing conversation on a point.**Nonargument**NARG: Nonarguables. Behaviors with no argumentative function.*

Table 3.2

Internal Consistency Reliability of the POMS

Factor	Item	Alpha-Coefficients
Depression	10	.81
Anger	10	.84
Vigor	10	.77

Note: Figures rounded to the nearest hundredth.

Table 3.3

POMS Subscale Descriptive Statistics

POMS Subscale	N	Mean	Standard Deviation
Depression	72	.16	.13
Anger	72	.25	.15
Vigor	72	.48	.09

Note: Figures rounded to the nearest hundredth.

CHAPTER 4

RESULTS

Variable Testing

In order to provide a detailed testing of argument behaviors and mood states, all variables were tested in component form. For example, convergence behaviors consist of agreement and acknowledgments so each component of convergence (agreements and acknowledgments) was tested. The same can be said for prompter and delimiter behaviors. Similarly, mood states were tested on a component level in the form of male mood and female mood. However, each of these components was also combined to look at over-all behavior or mood variables. These combinations are referred to as combined variables. For example, combined convergence represents both agreement and acknowledgment together. Further, combined vigor means both male and female vigor.

Descriptive Statistics

The data set revealed moderate skewness and significant kurtosis for some of the variables. Variables that exhibited a positive skew included objections, frames, forestall/remove, forestall/secure, delimiters, male anger, male vigor, combined (male and female) anger, female depression, male depression, and combined depression.

Positive skewness for these variables ranged from 2.028 to 4.947 with an average skewness of 3.3. The data revealed that the above-mentioned variables also exhibited significant kurtosis. Kurtosis scores ranged from 4.11 to 27.381 with an average kurtosis of 14.36.

The variables exhibiting skewness and kurtosis (objections, frames, forestall/remove, forestall/secure, delimiters, male anger, male vigor, combined anger, female depression, male depression, and combined depression) were transformed using a common logarithmic transformation. The logarithmic transformation was used due to its effectiveness for curbing kurtosis and skewness (Fink, 2009). Scores for skewness after the logarithmic transformation was performed ranged from 2.028 to 4.639 with an average skewness of 2.85. Similarly, scores for kurtosis ranged from 4.11 to 23.941 with an average kurtosis of 8.56.

Overall, the data transformation served to reduce the average skewness and kurtosis across all variables and reduce the number of variables exhibiting skewness and kurtosis. After the logarithmic transformation, the positively skewed variables included objections, forestall/remove, forestall/secure, delimiters, and male depression. Variables still exhibiting kurtosis after the transformation include objections, challenges, forestall/remove, forestall/secure, delimiters, male depression, and combined depression.

After the logarithmic transformation, scores for vigor ($M=.49$, $SD=.09$), anger ($M=.26$, $SD=.15$), and depression ($M=.18$, $SD=.13$) fell within parameters for a normal distribution (see Figures 4.1 and 4.2). Intercooder reliability fell within acceptable means. For average measure, intercooder reliability was .72, which is acceptable for interaction data. Reliability testing for the independent variables also fell within acceptable

parameters. Cronbach's alpha coefficients for vigor was .77, for anger .84, and for depression .81 (see Table 4.1).

Vigor

H1 predicted a positive correlation between vigor/activity mood state and convergence behaviors (acknowledgements and agreements). Ultimately, H1 was supported for men only. A one-tailed correlation was used to test those relationships. Vigor was correlated with agreement, acknowledgment, and combined convergence. Correlations between vigor and convergence revealed some support for the hypothesis. Vigor had a significant and positive correlation with agreement $r(72)=.31, p<.05$, but only in men (see Table 4.2). Females experiencing vigor did not have a significant correlation with agreement. Similarly, acknowledgment was positively associated with vigor in men $r(72)=.30, p<.05$. Finally, combined convergence behaviors (agreement and acknowledgment) were positively associated with vigor in men only $r(72)=.34, p<.05$.

Anger

H2 was supported for men only. H2 predicted a relationship between feelings of anger/hostility mood states and prompter argument behaviors, which include three behaviors that indicate disagreement (i.e., objections, challenges, and responses). H2 was supported for men. To test the relationship between anger and prompter behavior, four one-tailed correlations were used. Anger was correlated with objections, challenges, and responses, and all these behaviors combined. The positive correlation between objections and females experiencing anger was significant $r(72)=.28, p<.05$. Objections were also

positively correlated with combined (men and women) anger $r(72)=.31, p<.03$. In contrast, the relationships between men or women experiencing anger, correlated with challenges, responses, and combined prompter behaviors, were not significant. As a result, objections were the only significant association with female anger and combined anger.

Depression

The third hypothesis predicted a correlation between feelings of depression and delimiter argument behaviors (frames, forestall/secure, and forestall/remove). Testing for H3 revealed some support. Four one-tailed tests revealed significant correlation between depression and delimiter behaviors. Forestall/remove was positively associated with male depression $r(72)=.79, p<.01$, female depression $r(72)=.40, p<.01$, and combined depression $r(72)=.66, p<.01$. Frames, and forestall/secure had no significant relationship with depression. However, combined delimiter behavior was positively associated with depression in males $r(72)=.70, p<.01$, and combined depression $r(72)=.56, p<.01$. Thus, testing revealed some support for H3.

Research Questions

RQ1 sought to explore other associations between the three mood states and other argument behaviors. In order to answer this research question, one-tailed correlation tests were used. Agreements, acknowledgments, objections, challenges, responses, frames, forestall/remove, forestall/secure, combined convergence, combined prompter, and combined delimiters were correlated with individual and combined vigor, anger, and

depression. The test revealed 16 significant correlations (see Table 4.2).

Male vigor was positively associated with objections $r(72)=.30, p<.05$. Female vigor was negatively associated with objections $r(72)=-.31, p<.05$. Similarly, responses were positively associated with male vigor $r(72)=.42, p<.01$ and negatively associated with female vigor $r(72)=-.42, p<.01$. Combined prompter behavior was positively associated with male vigor $r(72)=.37, p<.01$ and negatively with female vigor $r(72)=-.42, p<.01$. Forestall/remove was positively associated with both male vigor $r(72)=.54, p<.01$ and combined vigor $r(72)=.34, p<.05$. Forestall/remove was negatively associated with female vigor $r(72)=-.30, p<.05$. Combined delimiter behaviors were associated positively with male vigor $r(72)=.43, p<.01$ and combined vigor $r(72)=.28, p<.05$. Challenges were associated negatively with female vigor $r(72)=-.36, p<.05$.

Objections were positively associated with combined depression $r(72)=.43, p<.01$. Similarly, responses and combined prompter behaviors were positively associated with combined depression $r(72)=.30, p<.05$ and $r(72)=.31, p<.05$, respectively.

Correlation testing revealed unexpected associations between anger and argument behavior. Forestall/remove was positively associated with both male anger $r(72)=.64, p<.01$ and combined anger $r(72)=.55, p<.01$. Finally, combined delimiter behavior was associated with male anger $r(72)=.53, p<.01$ and combined anger $r(72)=.44, p<.01$.

Initial testing revealed sex differences between male and female mood state correlations to argument behavior. The sex differences were particularly noted in correlations between vigor and convergence behaviors and anger and diverging behaviors. A post-hoc, two-tailed correlation was run to explore the sex differences further. Interestingly, a post-hoc test did not reveal significant associations among

vigorous mood states and converging argument behavior in women. Two associations were found to be significant in regards to sex differences in argument behavior and mood states. Men experiencing vigor were found to also exhibit more responses, which are a diverging argument behavior $r(72)=.42, p<.01$. Alternatively, women experiencing vigor significantly and negatively correlated to responses $r(72)=-.42, p=.01$. These findings suggest that when men experience vigor, they tend to engage in responses whereas females do the exact opposite.

Additional findings from the two-tailed post-hoc test revealed that male and female depression were significantly related to each other $r(72)=.33, p<.05$. Finally, men's vigor was significantly associated with female depression $r(72)=.34, p<.05$ (see Table 4.3).

RQ2 sought to explore the significant correlations between argument behaviors only. Some unexpected associations were revealed. Acknowledgements were positively associated with challenges $r(72)=.42, p<.01$, responses $r(72)=.28, p<.05$, and combined prompter behavior $r(72)=.29, p<.05$. Similarly, forestall/remove was positively associated with objection $r(72)=.36, p=.01$, responses $r(72)=.34, p<.05$, and combined prompter behavior $r(72)=.30, p<.05$.

Table 4.1

Alpha-Coefficients for Mood

	Cornbach's Alpha Coefficient
Vigor	.77
Anger	.84
Depression	.81

Table 4.2
Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Agreement	1	.52**	-.089	.08	.13	-.06	-.04	.04	.31*	-.14	.00	-.14	-.09	.27
2. Acknowledgement		1	.088	.42**	.28*	-.09	-.13	-.08	.30*	-.03	-.18	-.02	-.19	.01
3. Objection			1	.50**	.53**	-.23	.36*	-.01	.30*	-.31*	.15	.28*	.29*	.18
4. Challenges				1	.76**	-.12	.07	.02	.20	-.32*	-.15	.06	-.02	.01
5. Responses					1	-.12	.34*	-.02	.42**	-.42**	.11	.19	.20	.20
6. Frames						1	.07	.35*	-.16	.11	.00	-.14	.09	-.24
7. Forestall/Remove							1	-.02	.54**	-.30*	.64**	.10	.79**	.40**
8. Forestall/Secure								1	-.01	-.05	-.26	-.06	-.19	-.03
9. Male Vigor									1	-.06	.31*	.01	.41**	.34**
10. Female Vigor										1	-.15	-.26	-.13	-.32*
11. Male Anger											1	.26	.78**	.30*
12. Female Anger												1	.28**	.26
13. Male Depression													1	.33*
14. Female Depression														1

*Correlation is significant at the .05 level (1-tailed).

**Correlation is significant at the .01 level (1-tailed).

Table 4.3
Sex Differences Variables

	Female Depression	Responses
Male Vigor	.34*	.42**
Female Vigor		-.42**
Male Depression	.33*	

*Correlation significant at the .05 level (two-tailed.)

**Correlation significant at the .01 level (two-tailed).

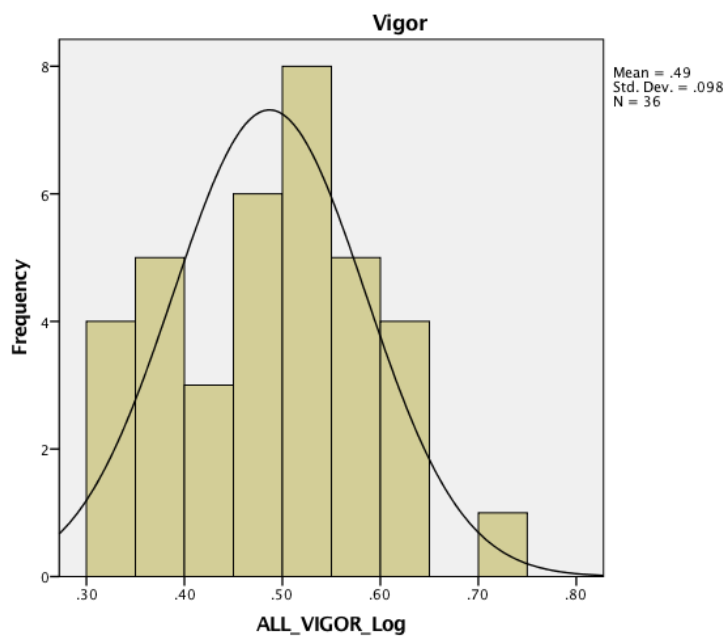


Figure 4.1 Distribution scores of vigor ($N=72$).

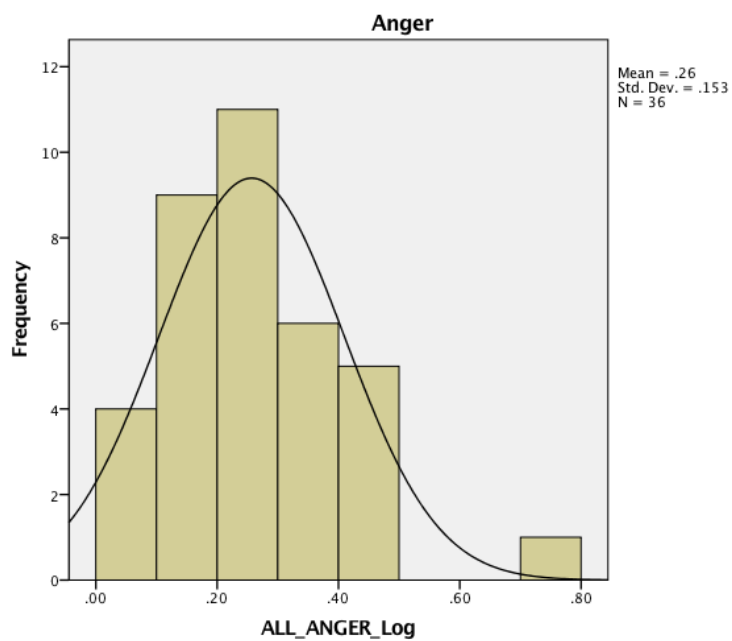


Figure 4.2 Distribution scores of anger ($N=72$).

CHAPTER 5

DISCUSSION

Argument is a vital social process. Scholars have attempted to answer the question: What function does arguments serve? Weger and Canary (2010) stated that argument is a process in which people attempt to gain a common understanding. Argument serves as the process in which people eliminate uncertainty as they align understanding. In another perspective, Hample (1983) offers the idea that argument serves as a process in which people attempt to persuade, gain personal knowledge, and gain personal growth. With either perspective of argument, we can see that argument is a function in which movement happens. In other words, arguments help social actors move to obtain a different state of being. It can be argued that people engage in argument to gain a different state that is *desired*. Hample (1983) commented on this movement to a desired state:

Thus, I think that it is no accident that argumentation has been so often associated with the verb “to move.” Argument moves people both literally and metaphorically. We commonly say argument moves us from premise to conclusion, from need to plan, from one belief to another. (p.565)

Does the movement that Hample refers to include an emotional movement? It stands to reason that the acquisition of knowledge, personal growth, and persuasion of others would have emotional consequences. However, it is difficult to understand exactly

how mood interacts with argument processes. Conversational argument tenets inform us that people seek to find common understanding through argument. I argue that the process to find common understanding is one that involves a transition of mood. The key argument component in which mood is most likely related involves arguers making inferences based on warrants.

Warrants and Mood State

The warrant is an argument element in which an emotional connection occurs. Lesse (1992) asserted that disagreement occurs by the interpretation of messages passed between people. Further, Newell (1984) said that disagreement fundamentally occurs because rifts between people involving either ideas or behaviors. During arguments, the conveying of ideas and the interpretation of messages are strongly related to warrants.

A fundamental part of Toulmin's theoretical view was that arguers had a "license" to infer based on information presented in warrants. This license is seen as permission to follow the logic of a warrant. As such, the reasoning embedded in warrants can be rejected or challenged based on the interpretation of the warrant's content. Toulmin (1979) said that warrants can be requested so that a leap between claim and conclusion is clearer. Toulmin also mentioned that trust can be seen as an element that is involved in analyzing warrants. One arguer can trust reasoning presented in warrants that another arguer gives. In this sense, warrants become a central part of arguments because people react to warrants in one of two ways: with trust or distrust. In other words, people may choose to believe in the reasoning within warrants. People often speak of a claim being "unwarranted," which means that people struggle to see the connection between a

conclusion and the inference to that conclusion that a warrant provides. One critical paradigm to a rejection of a warrant might be the perception of violation of trust between arguers. If arguers feel trust has been violated, they might respond by rejecting the warrant by offering their own objections, responses, and challenges.

When relating mood to warrants, there are other critical elements to consider. Brockriede, Wayne, and Ehninger (1960) noted that warrants are the mental leap in which arguers suggest their reasoning between claim and conclusion. The bridge between claim and conclusion can be interpreted in three distinct ways. First, arguers can link claims and conclusion through personal assumptions regarding the relationship between phenomena and the external world. Second, claims and conclusion can be linked through personal assumptions regarding the quality of the source of information. Third, claims and conclusion can be linked through personal assumptions regarding inner drives, values, and aspirations, which affect the behavior of the person who is offering the warrant.

Conversational arguments have strong interpersonal components. As such, people engaging in conversational arguments are likely to be appraising each other's drives, values, and aspirations as a means to gain common understanding. When warrants are offered among arguers, appraisals of trust, drives, values, and aspirations happen in relational contexts. It stands to reason that mood states have a connection to argument behaviors when warrants are not commonly agreed upon.

The interpretation of warrants is unique in conversational arguments due to the context of the discussion that often takes place between relational partners. Colomina-Almiñana, (2015) suggests that conversational arguments are unique in that there is often

no right or wrong conclusion to discussion. Statements, warrants, and beliefs often cannot be proven or disproven. People simply engage in arguments that are subjective and value-laden. According to Colomina-Almiñana, this lack of a provable conclusion can be problematic between relational partners as truth becomes open to interpretation. Such partners may therefore attempt to evaluate warrants based on their interpretation of truth. If truth cannot be reconciled between arguers, then mood state is likely a part of the interaction. Newell (1983) suggests that a strong factor for completing arguers between people is the ability to negotiate social rules. As negotiating social rules is affected by mood state this assessment makes sense.

Mood and Argument Correlations

This study revealed a relationship between mood state and argument behavior. H1 stated that vigorous mood states are correlated with convergent argument behavior. In men, vigor had a moderate correlation with agreement and acknowledgments. This finding is indicative of other positive mood state findings. Banas et al. (2012) reported positive moods are often associated with less complex arguments and more ease of persuasion. Their finding reflects the characteristics of analytic arguments. By comparison, analytic arguments are less complex than substantial arguments and include less opposition to elaboration behaviors. Vigor would appear to be associated with a mental process of accepting a partner's elaboration. Additionally, Liu et al. (2015) reported vigor is associated with higher rates of self-expression and more constructive opinions, which might suggest that people experiencing vigor are better at providing the reasoning indicative to elaborations. If better elaborations are constructed, it might be

easier to acknowledge or agree with the reasoning behind them.

As noted above, convergence behaviors indicate both agreement and acknowledgment. Both behaviors are correlated almost equally with vigor. Equal correlations indicate that both agreeing and acknowledging are likely behaviors when men are experiencing vigor.

Conversely, H2 predicted that anger would be positively associated with prompter behaviors. Objections were the only prompter behavior to be significantly associated with anger. Looking at the substantial/divergent argument field model, we can understand that objections and challenges are two prompter behaviors that provide opposition to elaborations. However, these two behaviors indicate the degree to which opposition occurs. Challenges are classified as “statements that present problems, questions, or reservations that must be addressed to reach agreement” (Canary, 1992, p. 4). On the other hand, objections are “statements that deny the truth or accuracy of another statement” (Canary, 1992, p. 4). The idea of a degree of opposition to the elaboration indicates how willing a person is to negotiate on a particular point.

From this study, we see that objections are the behaviors that are associated with anger. This correlation indicates that when partners are aroused by anger, they indicate arousal by providing a higher degree of disagreement. Guerrero et al. (2008) stated that anger can be associated with attacks or yelling. Further, Van Kleef and Côté (2007) state that anger leads to higher rates of disagreement. The correlation between objections and anger indicates *how* agreement is harder to achieve. In substantial/divergent argument fields, the difference between objections and challenges is the indication of the degree of potential negotiation. It would appear that in the presence of anger, there is less room for

negotiation due to the occurrence of objections rather than challenges to elaborations.

The final major assumption of this thesis asserts that depressive mood states would be associated with delimiter behaviors. In the delimiter argument behavior category, this study revealed that two behavior types were positively associated with depression: forestall/remove and combined delimiter behaviors. In fact, forestall/remove behaviors were some of the strongest correlations to depression in the data set. Unexpectedly, forestall/remove and combined delimiter behavior were also correlated to vigor and anger. A clue as to why these associations took place is in the characterization of forestall/remove behaviors. Canary (1992) describes forestall/remove as statements that stop discussion of a topic by taking it off the discussion table. This behavior is a way to say, “I’m done talking about this.” This statement can be presented in a variety of ways. Forestall/remove behaviors indicate types of conversations produced by the instructions of the surveys given to the participants.

Couple 15

Person	Message	Code
A	So now we're going to [talk about] our other issues.	F/RE
	or	
A	Well, I think that pretty much wraps up the issue of finances.	F/RE

In this study, each participant was asked to list three topics that had been a source of disagreement. Many participants listed common household and family problems. Sources of relational irritation included items such as money, household maintenance, time at work, relational maintenance, intimacy, etc. Immediately after doing so,

participants were asked to discuss the topics they had indicated. The forestall/remove behavior is the indication between partners that they should move on to the other topics.

Because no other delimiter argument behavior was associated with depression, a sensible conclusion might be that the association of combined delimiter behaviors is due solely to the strong presence of forestall/remove. Further, it appears likely that forestall/remove behaviors are associated with depression due to the nature of the experiment, rather than any meaningful association with mood states.

Some exploratory statistical measures (e.g., two-tailed correlations) led to finding unexpected correlations between mood and argument behavior. For men, both objections and responses were significantly and positively associated with feelings of vigor, which might suggest that vigor is not a catch-all mood state for positive feelings. Although vigor suggests mental alertness and a general readiness to engage with others, it does not necessarily represent feelings of happiness or joy.

Objections and responses correlated with depression. The characteristics of depression call for people to elicit social support (Wright, 2014). One conclusion one might draw from people feeling depression is that social introversion is linked to depression. However, it would appear that depression does have a connection with engaging in substantial arguments.

Finally, there were a few noteworthy correlations among argument behaviors. First, forestall/remove was significantly correlated with objections and responses. As mentioned above, one might conclude that forestall/remove behavior is also indicative of wrapping up topics of conversation within arguments. It is also likely that forestall/remove behaviors are connected with objections and responses for similar

reasons mentioned above. In other words, as the survey instructions called for partners to discuss different topics, they probably used forestall/remove behaviors more than if they had been in a natural discussion. Forestall/remove behaviors were the most pervasively correlated variable. Thus, the widespread nature of the forestall/remove variable is probably a by-product of the experimental design.

A more perplexing correlation was found between prompter behavior and acknowledgements. At face value, the correlation between challenges and responses with acknowledgements may appear counter-intuitive. However, acknowledgments, although classified as converging behaviors, are not necessarily agreement statements. Acknowledgements are behaviors inserted into a conversation that communicate understanding without conceding agreement. In this way, acknowledgments serve as a way to recognize another's point as the conversation progresses.

The differences in argument behaviors across gender were also unpredicted. These findings indicate that in arguments men and women may inherently behave differently. For example, the correlations between anger and prompter behavior show women acting the exact opposite as men. The difference in argument may account for a lack of correlation between mood and the super ordinate categories in argument behavior. In other words, male and female behaviors have canceled each other out.

Study Limitations and Suggestions for Future Research

This study has several limitations. First, The POMS test was limited to mood states that indicate positive affect. The POMS uses vigor/activity as the sole indicator for positive mood. Negative mood was well represented by the POMS. Bewilderment,

fatigue, anger, depression, and anxiety were all listed as identifiable and distinct mood states. Having distinctions in positive mood such as happiness, joy, excitement, feelings of mania, and other positive mood distinctions might have revealed new associations between mood and argument behavior. Similarly, it might have been helpful to get a sense of participant energy level. Vigor reflected arousal fairly well as referenced in the POMS test (Lorr, McNair, & Heuchert, 1991). However, it would be beneficial to see if there are mood combinations that represent low energy and high positive/negative mood. Gauging energy with mood state might help further explain correlations with analytic and substantial arguments. In other words, the question remains if low energy has any correlation with positive or negative moods.

Additionally, the survey instructions asked participants to identify their feelings over the week prior to the Canary study. This may have left out the identification of mood in the moment. As mentioned above, mood states are temporary mental states. The possibility exists of mood changing between answering survey questions and engaging in the conversation portion of the study. This study would have benefited from a reassessment of mood while the conversation proceeded. A final study limitation is the time between data collection and analysis. Over 10 years elapsed between the collection and analysis. During that time, some of the data set was lost. This thesis might have yield slightly different results if the entire data set had been analyzed.

Suggestions for future research include identifying new avenues of investigation regarding mood states and argument patterns. This study's main goal was to find correlations between mood and argument behavior. Investigating the impact of behavior on mood is an important next step. An analysis of behavior as a predictor for mood is

important to understand more about argument interaction.

Further, it would be prudent to investigate other mood states and their associations with argument behavior. Anger, vigor, and depression were investigated in this study, but other mood states may reveal important impactful or associative relationships with argument behavior. Understanding these connections is a crucial next step. For example, confusion and anxiety may have an impact on or a relationship with conversational argument behaviors. Inversely, identifying characteristics of different positive mood states such as joy and elation is an important next step in order to investigate positive mood beyond vigor.

Finally, one major avenue for future research involves analyzing in depth differences in argument behavior and gender difference. The distinct and sometimes opposite behavior between men and women engaged in an argument is an area that needs further examine. An additional study dedicated to mood and argument behavior differences is an important next step.

Conclusion

In conclusion, this study has several important impacts on argument research. First, it has successfully linked mood state to argument behavior. Specifically, we can now link anger and vigor to converging and diverging argument behaviors and inform future avenues of study that similarly investigate mood and conversational argument.

Using Toulmin's argument model as a theoretical backing, it allowed framing and understanding of specific argument behaviors that indicate convergence or divergence of ideas and understanding. The links between argument behavior and mood effectively

provided an understanding of the relationship between mood state and action. This study has also successfully provided additional understanding of relational discourse.

Overall, the findings were in line with what was expected. Interestingly, the study revealed a correlation between substantial arguments and depression. The connection between vigor and convergence was in line with current research of the effects of mood. Similarly, anger and prompter argument behaviors corresponded with previous findings.

The success of this research includes a link to mood and argument behavior, and helps to link Toulmin's model and his theoretical views of argument with the investigation of conversational argument. Overall, this study successfully contributes to a long line of inquiry regarding the argumentative interaction between people.

REFERENCES

- Argaman, E. (2015). Signaling equality: On humor and other semiotic resources that serve disagreement and display horizontal hierarchy. *Semiotica*, 2015(205), 169-190.
- Arslan, C. (2010). An investigation of anger and anger expression in terms of coping with stress and interpersonal problem-solving. *Kuram Ve Uygulamada Eğitim Bilimleri*, 10(1), 25-43.
- Azuelos-Atias, S. (2009). The rationality of legal argumentation. *Pragmatics & Cognition*, 17(2), 383-401.
- Banas, J., Turner, M. M., & Shulman, H. (2012). A test of competing hypotheses of the effects of mood on persuasion. *Communication Quarterly*, 60(2), 143-164.
- Brockriede, W., & Ehninger, D. (1960). Toulmin on argument: An interpretation and application. *Quarterly Journal of Speech*, 46, 44-53.
- Burnett, A., Sargent, J E., & Badzinski, D. M. (2010). Using multiple coding schemes to understand argument in In the Jury Room. *Communication Methods & Measures*, 4(1/2), 133-146.
- Canary, D. J. (1992). *Manual for coding conversational argument*. Unpublished manuscript. Department of Speech Communication, Pennsylvania State University, University Park, PA.
- Canary D. J., Brossmann J. E., Brossmann B. G., & Weger Jr., H. (1995). Toward a theory of minimally rational argument: Analysis of episode specific effects of argument structures. *Communication Monographs*, 62, 183-213.
- Canary, D. J., & Lakey, S., (2013). *Strategic conflict*. New York, NY: Routledge.
- Canary, D. J., & Seibold, D. R. (2010). Origins and development of the Conversational Argument Coding Scheme. *Communication Methods and Measures*, 4(1/2), 7-26.

- Canary, D. J., Weger H. Jr., & Stafford, L. (1991). Couples' argument sequences and their associations with relational characteristics. *Western Journal of Speech Communication, 159*, 159-176.
- Caughlin, J. P., & Huston, T. L. (2006). Demand/withdraw patterns in marital relationships: An individual differences perspective. In R.M. Dailey & B.A. Le Poire (Eds.), *Applied interpersonal communication matters: Family, health, and community relations*. (pp. 11-38). Ipswich, MA: Peter Lang Publishing.
- Caughlin, J. P., & Huston, T. L. (2002). A contextual analysis of the association between demand/withdraw and marital satisfaction. *Personal Relationships, 9*, 95-119.
- Cionea, I. A., & Hample, D. (2015). Serial argument topics. *Argumentation & Advocacy, 52*(1), 75-88.
- Cionea, I. A., Johnson, A. T., Bruscella, J. S., & Van Gilder, B. (2015). Taking conflict personally and the use of the demand/withdraw pattern in intraethnic serial arguments. *Argumentation & Advocacy, 52*(1), 32-43.
- Colomina-Almiñana, J. J. (2015). Disagreement and the speaker's point of view. *Language & Dialogue, 5*(2), 224-246.
- Creasey, G., Kershaw, K., & Boston, A. (1999). Conflict management with friends and romantic partners: The role of attachment and negative mood regulation expectancies. *Journal of Youth and Adolescence, 28*(5), 523-543.
- Das, E. T. (2012). Mood as a resource in dealing with health recommendations: How mood affects information processing and acceptance of quit-smoking messages. *Psychology & Health, 27*(1), 116-127.
- Davis, D., Easlon, E., Halligan, C., & Grant, S. (2007). Communication as therapy: The influences of social interaction on seasonal affective disorder. *Conference Papers -- International Communication Association, 1*-34.
- Di Muro, F., & Murray, K. B. (2014). An arousal regulation explanation of mood effects on consumer choice. *Journal of Consumer Research, 14*, S327-S337.
- Debrot, A. B. (2014). Stroking your beloved one's white bear: Responsive touch by the romantic partner buffers the negative effect of thought suppression on daily mood. *Journal of Social & Clinical Psychology, 33*(1), 75-97.
- Fink, E. (2009). The FAQs on data transformation. *Communication Monographs, 76*, 379-397.
- Fletcher, C. V., Nakazawam, M., Chen, Y., Oetzel, J. G., Ting-Toomey, S., Chang, S., & Zhang, Q. (2014). Establishing cross-cultural measurement equivalence of scales

- associated with face-negotiation theory: A critical issue in cross-cultural comparison. *Journal of International & Intercultural Communication*, 7(2), 148-169.
- Gottman, J. (1994). *What predicts divorce? The relationship between marital processes and marital outcomes*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Gouran, D. S. (1989). Functions of argument in decision-making discussion: Some prescriptions for increasing the probability of rational choice. *Conference Proceedings—National Communication Association/American Forensic Association (Alta Conference on Argumentation)*, 481-488.
- Guerrero, L. K., La Valley, A. G., & Farinelli, L. (2008). The experience and expression of anger, guilt, and sadness in marriage: An equity theory explanation. *Journal of social and Personal Relationships*, 25, 699-724.
- Hatfield, J. D., & Wieder-Hatfield, D. (1978). The comparative utility of three types of behavioral units for interaction analysis. *Communication Monographs*, 45, 44-50.
- Hatfield, E., Traupmann, J., Sprecher, S., Utne, M., & Hay, M. (1985). Equity in close relationships. In W. Ickes (Ed.), *Compatible and incompatible relationships* (pp. 91–117). New York: Springer-Verlag.
- Hample, D. (1983). The functions of argument. *Conference Proceedings -- National Communication Association/American Forensic Association (Alta Conference On Argumentation)*, 560-575.
- Hample, D., Warner, B., & Norton, H. (2006). The effects of arguing expectations and predispositions on perceptions of argument quality and playfulness. *Argumentation & Advocacy*, 43(1), 1-13.
- Hullett, C. (2004). The impact of mood on persuasion: A meta-analysis. *Conference Papers -- International Communication Association*, 1.
- Jackson, S., & Jacobs, S. (1980). Structure of conversational argument: Pragmatic bases for the enthymeme. *Quarterly Journal of Speech*, 66(3), 251.
- Jacobs, S. (1983). When worlds collide: An application to field theory to rhetorical conflict. *Conference Proceedings -- National Communication Association/American Forensic Association (Alta Conference On Argumentation)*, 560-575.
- Johnson, A. J. (2009). A functional approach to interpersonal argument: Differences between public-issue and personal-issue arguments. *Communication Reports*, 22(1), 13-28.

- Johnson, A. J., Averbek, J. M., Kelley, K. M., & Shr-Jie, L. (2010). Serial argument type: Comparing serial arguments about public and personal issue argument topics. *Conference Proceedings—National Communication Association/American Forensic Association (Alta Conference on Argumentation)*, 211-218.
- Johnson, A. J., Becker, J. H., Wigley, S., Haigh, M. M., & Craig, E. A. (2007). Reported argumentativeness and verbal aggressiveness levels: The influence of type of argument. *Communication Studies*, 58(2), 189-205.
- Johnson, A. J., Kelley, K. M., Liu, S., Averbek, J. M., King, S. D., & Bostwick, E. N. (2014). Family serial arguments: Beliefs about the argument and perceived stress from the argument. *Communication Reports*, 27(2), 116-128.
- Johnson, K. L., & Roloff, M. E. (2000). The influence of argumentative role (initiator vs. resistor) on perceptions of serial argument resolvability and relational harm. *Argumentation*, 14, 1-15.
- Johnson, K. L., & Roloff, M. E. (1998). Serial arguing and relational quality: Determinants and consequences of perceived resolvability. *Communication Research*, 25, 327-343.
- Keith, W., & Beard, D. (2008). Toulmin's rhetorical logic: What's the warrant for warrants? *Philosophy & Rhetoric*, 41(1), 22-50.
- Knobloch, L. K., Sharabi, L. L., Delaney, A. L., & Suranne, S. M. (2016). The role of relational uncertainty in topic avoidance among couples with depression. *Communication Monographs*, 83(1), 25-48.
- Kovess-Masfety, V. Y. (2013). Irritable mood in adult major depressive disorder: Results from the world mental health surveys. *Depression & Anxiety* (1091-4269), 30(4), 395-406.
- Lauerbach, G. (2007). Argumentation in political talk shows interviews. *Journal of Pragmatics*, 39(8), 1388-1419.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: McGraw-Hill.
- Legge, N. J. (1992). 'What did you mean by that?': The functions of perceptions in interpersonal argument. *Argumentation & Advocacy*, 29(2), 41.
- Levine, T. R., & Franklin, J. B. (1996). The impact of self and others' argumentativeness on talk about controversial issues. *Communication Quarterly*, 44(3), 345-358.

- Lienemann, B. A., Siegel, J. T., & Crano, W. D. (2013). Persuading people with depression to seek help: Respect the boomerang. *Health Communication*, 28(7), 718-728.
- Liu, M. (2009). The intrapersonal and interpersonal effects of anger on negotiation strategies: A cross-cultural investigation. *Human Communication Research*, 35(1), 148-169.
- Liu, W., Tangirala, S., Lam, W., Chen, Z., Jia, R. T., & Huang, X. (2015). How and when peers' positive mood influences employees' voice. *Journal of Applied Psychology*, 100(3), 976-989.
- Loh, J. E. (2014). Be happy: The role of resilience between characteristic affect and symptoms of depression. *Journal of Happiness Studies*, 15(5), 1125-1138.
- Lorr, M., McNair, & D. M. Heuchert, J., P. (1991). *Profile of mood states*. New York: MHS.
- Lount, R. J. (2010). The impact of positive mood on trust in interpersonal and intergroup interactions. *Journal of Personality and Social Psychology*, 98(3), 420-433.
- Marco, C. A., Neale, J. M., Schwartz, J. E., Shiffman, S., & Stone, A. A. (1999). Coping with daily events and short-term mood changes: An unexpected failure to observe effects of coping. *Journal of Consulting and Clinical Psychology*, 67(5), 755-764.
- Miller, C. R., (1983). Fields of argument and special topoi. *Conference Proceedings – National Communication Association/American Forensic Association (Alta Conference on Argumentation)*, 147-158.
- Moag, J. S. (1966). Field logic and communication. *Journal of Business Communication*, 3(2), 11-13.
- Neff, J. J., Fulk, J., & Yuan, Y. C. (2014). Not in the mood? Affective state and transactive communication. *Journal of Communication*, 64(5), 785-805.
- Nevell, S. E., & Stutman, R. K. (1983). Interpersonal disagreement: The study of social confrontation. *Conference Proceedings -- National Communication Association/American Forensic Association (Alta Conference on Argumentation)*, 725-739.
- Newell, S. E. (1984). A socio-pragmatic perspective of argument fields. *Western Journal of Speech Communication: WJSC*, 48(3), 247-261.
- Norcross, J. O. (1984). Factor structure of the profile of mood states (POMS): Two

- partial replications. *Journal of Clinical Psychology*, 40(5), 1270-1277.
- Nuñez, N., Schweitzer, K., Chai, C. A., & Myers, B. (2015). Negative emotions felt during trial: The effect of fear, anger, and sadness on juror decision making. *Applied Cognitive Psychology*, 29(2), 200-209.
- Park, E. S., & Hinsz, V. B. (2015). Group interaction sustains positive moods and diminishes negative moods. *Group Dynamics: Theory, Research, And Practice*, 19(4), 290-298.
- Parsons, B. (2010). Social networks and the affective impact of political disagreement. *Political Behavior*, 32(2), 181-204.
- Qin, Z., Lei, X., & Maier, G. A. (2013). The interpersonal effects of perceived partner anger and conflict strategies in serial arguments: Perceived resolvability and rumination as sensemaking mediators. *Ohio Communication Journal*, 51, 141-166.
- Roloff, M. E., Reznik, R. M., Miller, C. W., & Johnson, K. L. (2015). "I thought we settled this?!" Antecedents and consequences of resolution of an initial episode in a serial argument. *Argumentation & Advocacy*, 52(1), 8-31.
- Rowland, R. C. (2008). Purpose, argument fields, and theoretical justification. *Argumentation*, 22(2), 235-250.
- Semic, B. A., & Canary D. J. (1997). Trait argumentativeness, verbal aggressiveness, and minimally rational argument: An observational analysis of friendship discussions. *Communication Quarterly*, 45(4), 354-378.
- Shirom, A. (2011). Vigor as a positive affect at work: Conceptualizing vigor, its relations with related constructs, and its antecedents and consequences. *Review of General Psychology*, 15(1), 50-64.
- Sinaceur, M., Kopelman, S., Vasiljevic, D., & Haag, C. (2015). Weep and get more: When and why sadness expression is effective in negotiations. *Journal of Applied Psychology*, 100(6), 1847-1871.
- Seibold, D. R., Lemus, D. R., & Kang, P. (2010). Extending the conversational argument coding scheme in studies of argument quality in group deliberations. *Communication Methods & Measures*, 4(1/2), 46-64.
- Seibold, D. R., & Meyers, R. A. (2007). Group argument: A structuration perspective and research program. *Small Group Research*, 38(3), 312-336.
- Sprecher, S. (2001). Equity and social exchange in dating couples: Associations with satisfaction, commitment, and stability. *Journal of Marriage and Family*, 63,

599–613.

- Tiedens, L. Z. (2001). Anger and advancement versus sadness and subjugation: The effect of negative emotion expressions on social status conferral. *Journal of Personality and Social Psychology*, 80(1), 86-94.
- Toulmin, S. E. (1958). *The uses of argument*. Cambridge, England: Cambridge University Press.
- Toulmin, S. E. (1972). *Human understanding*. Princeton, NJ: Princeton University Press.
- Toulmin, S. E. (2001). *Return to reason*. Cambridge, MA: Harvard University Press.
- Toulmin, S. E., Rieke, R., & Janik, A. (1979). *An introduction to reasoning*. New York: Macmillan Publishing Co.
- Trent, J. D. (1968). Toulmin's model of an argument: An examination and extension. *Quarterly Journal of Speech*, 54(3), 252.
- Van Eemeren, F. H., Groostendorst, R., & Henkenmans, F. S. (1996). *Fundamentals of argumentation theory: A handbook of historical backgrounds and contemporary developments*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Van Kleef, G. A., & Côté, S. (2007). Expressing anger in conflict: When it helps and when it hurts. *Journal of Applied Psychology*, 92(6), 1557-1569.
- Vallacher, R. R., Nowak, A., & Zochowski, M. (2005). Dynamics of social coordination: The synchronization of internal states in close relationships. *Interaction Studies*, 6(1), 35-52.
- Vella, E. S. (2012). Hostile mood and social strain during daily life: A test of the transactional model. *Annals of Behavioral Medicine*, 44(3), 341-352.
- Verheij, B. (2005). Evaluating arguments based on Toulmin's scheme. *Argumentation*, 19(3), 347-371.
- Villodas, F. S. (2011). Examining the factor structure of the positive and negative affect schedule (PANAS) in a multiethnic sample of adolescents. *Measurement & Evaluation in Counseling & Development*, 44(4), 193-203.
- Voss, J. F. (2005). Toulmin's model and the solving of ill-structured problems. *Argumentation*, 19(3), 321-329.
- Wegener, D. J. (1994). Effects of mood on high elaboration attitude change: The

- mediating role of likelihood judgements. *European Journal of Social Psychology*, 24(1), 25-43.
- Weger, Jr., H., & Aakhus, M. (2003). Arguing in internet chat rooms: Argumentative adaptations to chat room design and some consequences for public deliberation at a distance. *Argumentation & Advocacy*, 40(1), 23-38.
- Weger Jr., H., & Canary, D. J. (1991). A closer look at argument behavior in romantic dyads. *Conference Proceedings -- National Communication Association/American Forensic Association (Alta Conference on Argumentation)*, 211-216.
- Weger, H., & Canary, D. J. (2010). Conversational argument in close relationships: A case for studying argument sequences. *Communication Methods & Measures*, 4(1/2), 65-87.
- Wright, K. B., King, S., & Rosenberg, J. (2014). Functions of social support and self-verification in association with loneliness, depression, and stress. *Journal of Health Communication*, 19(1), 82-99.
- Zhang, Q. (2014). Emotion matters in serial arguments: The effects of anger and compassion on perceived resolvability and relationship confidence in dating relationships. *Communication Research Reports*, 31(1), 102-109.